

Hiroshi INOUE*: A new *Lejeunea* (Hepaticae) from Japan井上 浩*: 日本産 *Lejeunea* 属の一新種

During the field works in Chichibu-Okutama Mountains, I collected several times an unfamiliar *Lejeunea* species. It occurred on the bark of the deciduous tree along the valley. This unfamiliar *Lejeunea* species appears superficially to be a form of *Lejeunea flava* or *L. vaginata*. Oil-body type of this species is the same with that of *L. flava* or *L. vaginata*. However, its characteristic structure of the leaf-lobule clearly indicates that this species is distinct from them and their allies. By its underleaf- and perianth-form, as well as leaf-lobule structure, this species is remarkably different from the ever known Japanese *Lejeunea* species.

After the study of this species, I found in the herbarium of the Hattori Botanical Laboratory two collections, which were quite the same with my specimens and were named as "*Lejeunea kodamae* Ikegami" by Mr. Y. Ikegami. Therefore, I will describe this species as follows:

***Lejeunea kodamae* Ikegami et Inoue, spec. nov. (fig. 1)**

Similis *Lejeunea flavae* sed differt ab apices lobuli oblique vel raro recte truncato, bidentato, dente mediano 3-cellulari longo; amphigastriis caulinis concavis, lobis late triangularis, 4-7 cellulas latis. Specimen typicum legit H. Inoue no. 8488.

Plants yellowish or pure green, in drying often whitish, in small and loose patches, or scattered. Shoots 0.8-1.0 mm. wide, up to ca. 1.5 cm. long, fertile shoot more or less narrower. Stem 62-80 μ in diameter, slender, ventral cortical cells 20-23 $\times$ 30-50-(60) μ , moderately thick-walled, irregularly branched, consistently with one subfloral innovation. Leaves loosely imbricate, more or less concave or often nearly flat, obliquely to widely spreading, ovate to ovate-oblong, 0.5-0.8 mm. long $\times$ 0.4-0.6 mm. wide (length/width ratio approximately 1.3), obtuse or often rounded at apex, margin entire throughout, or often weakly crenulate by projecting marginal cells, antical margin arching, extending to stem midline, base narrow (the widest portion lying at about 1/3 of length from base), postical margin less arched than dorsal one, keel strongly arched. Lobules strongly inflated along keel and flat along free margin, widely ovate or suborbicular, about 0.2 mm. long and wide, (ca. 0.4 times as long as dorsal lobe), apex obliquely or rarely erectly

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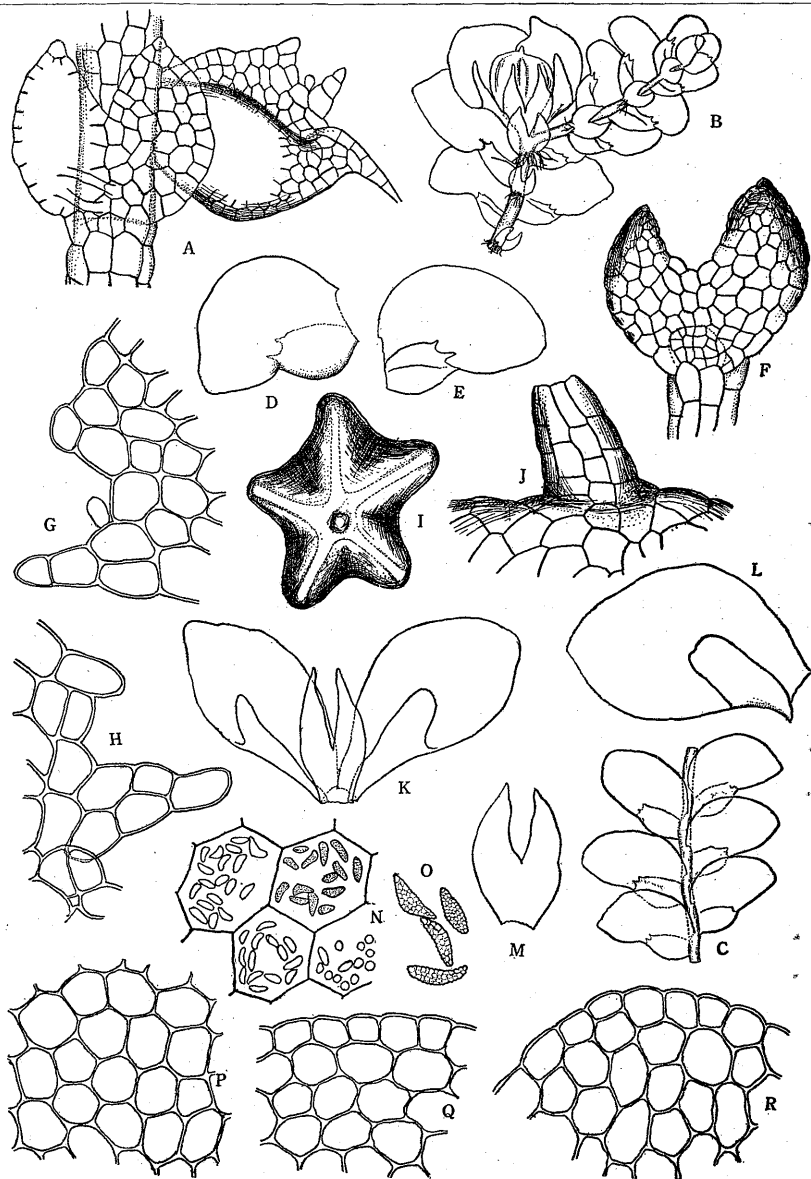


Fig. 1. *Lejeunea kodamae* Ikegami et Inoue. A. Part of stem showing underleaf and leaf-lobule, ventral view, $\times 130$. B. Apex of stem, with female inflorescence, ventral view, $\times 20$. C. Part of sterile stem, dorsal view, $\times 20$. D, E. Leaves, $\times 40$. F. Underleaf, $\times 130$. G, H. Apices of leaf-lobules, $\times 300$. I. Cross-section of perianth through apex, $\times 35$. J. Beak of perianth, $\times 300$. K. Female bracts and bracteole, $\times 40$. L. Bract, $\times 40$. M. Bracteole, $\times 40$. N. Cells from leaf-middle showing oil-bodies, $\times 750$. O. Individual oil-bodies, $\times 1500$. P. Cells from leaf-middle, $\times 300$. Q. Cells from leaf-margin, $\times 300$. R. Cells from leaf-apex, $\times 300$. All figures were drawn from the type.

truncate, with two distinct large teeth, the proximal smaller and mostly 1-celled, often obtuse, the distal larger, (1)–2 cells wide at base and 3–(4) cells long, with a hyaline papilla on near proximal base. Cells of leaf-apex $13\text{--}18 \times 13\text{--}20 \mu$, of middle $20\text{--}27 \times 24\text{--}30 \mu$, of margin $13\text{--}20 \times (17)\text{--}20\text{--}28 \mu$ (a little smaller than inner cells), thin-walled throughout, rarely with intermediate thickenings, trigones small, triangular. Oil-bodies (4)–10–17–(23) per cell, $2\text{--}3 \mu$ in elliptical or $3\text{--}5 \times 2\text{--}3 \mu$ or often up to $10 \times 3 \mu$ in fusiform, with many globules, grayish. Underleaves large, distant or often contiguous, nearly orbicular or ovate-orbicular, moderately concave, usually $210\text{--}250 \mu$ long $\times 170\text{--}250 \mu$ wide, rounded at base, divided to $1/2$ of length, lobes triangular, acute, usually 4–7 cells wide at base, sinus acute, margin entire. Autoecious; androecia very rare, on short lateral branches, bracts usually in 3–6 pairs, closely imbricate, subequally bilobed; female inflorescence terminal on stem-apex or long leading lateral branches, nearly invariably with subfloral innovation, innovation often repeatedly floriferous; bracts large, oblong-ovate, ca. 0.8 mm. long $\times 0.5$ mm. wide, apex subobtuse, lobule oblong to ovate-lanceolate, 0.3 mm. long $\times 0.15$ mm. wide, rounded or nearly truncate at apex, bracteoles free, oblong, 0.4 mm. long $\times 0.3$ mm. wide, bilobed to $1/2$ of length, lobes triangular, sinus narrow and sharp. Perianth pyriform, not so emergent from bracts, ca. 500μ long $\times 360 \mu$ wide, more or less sharply 5-carinate in upper half, keel inflated, smooth, apex broad and truncate.

Specim. Exam.: On bark of *Carpinus* sp., occurring with *Cololejeunea minuta* and *Frullania* sp. (fragment), in the dense deciduous forest along the Ohchigawa valley (ca. 700 m. s. m.); July 27, 1959, H. Inoue no. 8488–type in herb. Tokyo Univ. Education, duplicate in herb. NICH: On bark of the deciduous tree, occurring with *Frullania truncatifolia*, *Nipponolejeunea pilifera*, or *Frullania usamiensis*, in Mt. Mitake, Tokyo Pref. (ca. 700 m. s. m.); Apr. 3, 1960, H. Inoue no. 8745, 8750, 8758: On trunk of *Acer* sp., occurring with *Brachiolejeunea sandvicensis*, *Frullania kagoshimensis* and *F. truncatifolia*, at Nagaishidani, Komonocho, Mie Pref. (ca. 600 m. s. m.); Aug. 9, 1955, T. Kodama no. 10000 in herb. NICH: On tree-trunk near Gyoki fall in Kita-idzu, Shizuoka Pref.; Nov. 24, 1957, T. Sugino no. 14 in herb. NICH.

As seen in the above description, *L. kodamae* superficially resembles to *L. flava* or *L. vaginata* complex. But, the leaf-lobules with two large teeth at apex are the most significant characteristic of this species to separate it from *L. flava* or *L. vaginata*. In Japanese members of *Lejeunea* have ever been known no species

whose leaf-lobules are toothed as this. In Yunnan (China) is known a single allied species with similar leaf-lobules, *Lejeunea bidentula* Herz. (Symb. Sinic. 5: 51, fig. 19. 1930). *L. bidentula* and *L. kodamae* are common in many features as plant size, the leaf size and form, the bracts and bracteole forms, and, most characteristically, the bi-toothed leaf-lobule. In *L. bidentula*, the lobule is strongly inflated and, according to Herzog's figure 8, it is not plane along free margin, and the keel is more or less crenulate (see fig. 3 by Herzog). Furthermore, the perianth is more or less strongly carinate and the underleaf is larger. In both species the marginal cells of leaf-lobe are more or less smaller than inner cells, but in *L. bidentula* leaf cells seem to be larger and the trigones are often absent. However, above distinctions between *L. kodamae* and *L. bidentula* seem to be not so sufficient as to separate two taxa in the species degree. This problem may be dissolved by the study of the type material of *L. bidentula* Herz.

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摘 要

秩父奥多摩地方の苔類を調査中に未知の *Lejeunea* 属の一種を秩父大血川と奥多摩御岳において採集した。本種は葉下片の先端にけん著な二歯をもつことによって明らかに邦産の *Lejeunea* 各種から区別できるが、*L. flava* や *L. vaginata* などと近いものと考えられる。さらに雲南から一度記載されている *L. bidentula* に最も近い関係にあると思われるが、*L. bidentula* については原記載と図しか参考ができず、目下のところ基準標本が調べられないので詳細な比較は他日にゆずりたい。なお同じ種がすでに池上氏によって児玉務氏の採集品中に発見され *L. kodamae* Ikeg. の名が用意されていたので、池上氏の同意をえてここに発表した次第である。

○高等植物分布資料 (18) Materials for the distribution of vascular plants in Japan (18)

○ミカエリソウ *Comanthosphace stellipila* (Miq.) S. L. Moore の分布は今迄本州の福井県以西ということになっていたが、私は長野県西筑摩郡吾妻村賤母国乃林で採集した。小群落をなしていた。(林弥栄：林試浅川実験林)

○ウラジロウツギ *Deutzia Maximowicziana* Makino は今迄本州の岐阜県(美濃)以西に分布することになっていたが、私は静岡県水窪町白倉山国有林(数株)と長野県下伊那郡上林遠山川上流の北俣沢国有林(小群落)で採集した。(林弥栄)